

Amendment and Response

Applicant: N. Lee Rhodes

Serial No.: 09/919,148

Filed: July 31, 2001

Docket No.: 10013110-1

Title: NETWORK USAGE ANALYSIS SYSTEM AND METHOD FOR DETERMINING EXCESS USAGE

IN THE CLAIMS

Please amend claims 1, 5, 6, 8, 9, 14, 18-22, and 27-30 as follows:

1. (Currently Amended) A computer-implemented method for modeling subscriber usage in a usage based revenue system, the method comprising:
defining a threshold value; and
determining an excess usage component by obtaining the sum of all subscriber usage greater than the threshold value, and subtracting the product of a sum of all subscriber hits greater than the threshold value and the threshold value.
2. (Original) The method of claim 1, further comprising using the excess usage component to analyze subscriber usage.
3. (Original) The method of claim 1, further comprising using the excess usage component to analyze revenue associated with subscriber usage for the threshold value.
4. (Original) The method of claim 1, further comprising defining an excess usage rate; and determining an excess usage revenue value by multiplying the excess usage rate by the excess usage component.
5. (Currently Amended) The method of claim 1, further comprising defining a total number of subscribers; defining a fixed fee; and determining a fixed fee revenue value by multiplying the total number of subscribers by the fixed fee revenue value.
6. (Currently Amended) The method of claim 5, further comprising defining an excess usage rate; determining an excess usage revenue value by multiplying the excess usage rate by the excess usage component; and determining a total revenue value associated with a threshold value by adding the fixed fee revenue value to the excess usage revenue value.

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7. (Original) The method of claim 1, further comprising determining total usage; determining cumulative subscriber usage below the threshold value; and determining cumulative usage greater than the threshold value by subtracting the cumulative subscriber usage below the threshold value from the total usage.

8. (Currently Amended) The method of claim 1, further comprising determining ~~the~~ total number of ~~subscriber~~ subscribers; determining cumulative number of subscribers below the threshold value; and determining the cumulative number of subscribers ~~-greater than the~~ threshold value by subtracting the cumulative number of subscribers ~~-below the threshold~~ value from the total number of subscribers.

9. (Currently Amended) A computer-implemented method of analyzing usage data, the method comprising:

collecting usage record events;

generating a distribution table using the usage record events;

defining a threshold value; and

determining an excess usage component using the distribution table by obtaining ~~the~~ sum of all subscriber usage greater than the threshold value, and subtracting ~~the~~ product of ~~the~~ sum of ~~the~~ number of subscribers ~~-greater than the~~ threshold value and the threshold value.

10. (Original) The method of claim 9, further comprising generating an aggregation table from the usage record events; and generating the distribution table from the aggregation table.

11. (Original) The method of claim 9, wherein generating the distribution table further comprises defining aggregation bin sizes; and tracking user hits for each aggregation bin size.

12. (Original) The method of claim 11, wherein generating the distribution table further comprises tracking total usage for each aggregation bin size.

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13. (Original) The method of claim 11, wherein generating the distribution table further comprises tracking cumulative users (hits) for each aggregation bin size.

14. (Currently Amended) The method of claim 11, wherein generating the distribution table further comprises computing the cumulative usage for each aggregation bin size.

15. (Original) The method of claim 9, further comprising using the excess usage component to analyze subscriber usage.

16. (Original) The method of claim 9, further comprising using the excess usage component to analyze revenue associated with subscriber usage for the threshold value.

17. (Original) The method of claim 9, further comprising defining an excess usage rate; and determining an excess usage revenue value by multiplying the excess usage rate by the excess usage component.

18. (Currently Amended) The method of claim 9, further comprising defining a total number of subscribers; defining a fixed fee; and determining a fixed fee revenue value by multiplying the total number of subscribers by the fixed fee ~~revenue value~~.

19. (Currently Amended) The method of claim 9~~18~~, further comprising defining an excess usage rate; determining an excess usage revenue value by multiplying the excess usage rate by the excess usage component; and determining a total revenue value associated with a threshold value by adding the fixed fee revenue value to the excess usage revenue value.

20. (Currently Amended) The method of claim 9, further comprising determining total usage; determining cumulative subscriber usage below the threshold value; and determining all subscriber usage greater than the threshold value by subtracting the cumulative subscriber usage below the threshold value from the total usage.

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21. (Currently Amended) The method of claim 9, further comprising determining total number of subscribers; determining the cumulative number of subscribers -below a threshold value; and determining the number of -subscribers greater than the threshold value by subtracting the cumulative number of subscribers -below the threshold value from the total number of subscribers.

22. (Currently Amended) A computer-implemented method for modeling subscriber usage in a usage based revenue system, the method comprising:

defining a threshold value;

determining an excess usage component by obtaining ~~the~~ a sum of all subscriber usage greater than the threshold value, and subtracting ~~the~~ a product of a sum of all subscriber hits greater than the threshold value and the threshold value;

generating a statistical cumulative distribution model representative of subscriber usage;

storing the statistical cumulative distribution model in a look-up table; and

obtaining the sum of all subscriber usage greater than the threshold value from the look-up table.

23. (Original) A data analysis system for modeling subscriber usage in a usage based revenue system comprising:

a data analysis system server, wherein upon defining a threshold value, the data analysis system server determines an excess usage component by obtaining the sum of all subscriber usage greater than the threshold value, and subtracting the product of the sum of the number of subscribers greater than the threshold value and the threshold value.

24. (Original) The system of claim 23, further wherein the data analysis system server is configured to use the excess usage component to analyze subscriber usage.

25. (Original) The system of claim 23, further wherein the data analysis system server is configured to use the excess usage component to analyze revenue associated with subscriber usage for the threshold value.

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26. (Original) The system of claim 23, further wherein an excess usage rate is defined; and the data analysis system server determines an excess usage revenue value by multiplying the excess usage rate by the excess usage component.

27. (Currently Amended) The system of claim 23, further wherein a total number of subscribers and a fixed fee are defined at that data analysis system server; and the data analysis system server determines a fixed fee revenue value by multiplying the total number of subscribers by the fixed fee, ~~revenue value~~.

28. (Currently Amended) The system of claim ~~26~~27, further wherein an excess usage rate; is defined at the data analysis system server and the data analysis system server determines an excess usage revenue value by multiplying the excess usage rate by the excess usage components, and determines a total revenue value associated with a threshold value by adding the fixed fee revenue value to the excess usage revenue value.

29. (Currently Amended) The system of claim 23, further wherein the data analysis system server is configured to determine total usage, determine cumulative subscriber usage below the threshold value, and determine all subscriber usage greater than the threshold value by subtracting the cumulative subscriber usage below the threshold value from the total usage.

30. (Currently Amended) The system of claim 23, further wherein the data analysis system server is configured to determine ~~the~~a total number of subscribers; determine the cumulative number of subscribers below ~~the~~ threshold value, and determine the number of subscribers ~~-greater than the threshold value~~ by subtracting the cumulative number of subscribers below the threshold value from the total number of subscribers.

31. (Original) A computer-readable medium having computer executable instructions for performing a method for modeling subscriber usage in a usage based revenue system, the method comprising:

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defining a threshold value;

determining an excess usage component by summing all subscriber usage greater than the threshold value, and subtracting the product of the sum of the number of subscribers greater than the threshold value and the threshold value.